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# ECONOMIC INDICATORS



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### THE GATES OF THE MOUNTAINS

This area was explored as part of the Louisiana Purchase by Lewis and Clark in 1805 and 1806. They thought their journey up the Missouri River had come to an end when they reached what is now Holter Lake because the rock walls appeared to form a dead end. As they continued, the walls gave the illusion of opening to allow their passage, hence the name, "The Gates of The Mountains".

Cover Photo By - Joan Eaton

MONTANA  
ECONOMIC INDICATORS

AN ANALYSIS OF PAST AND PRESENT ECONOMIC TRENDS

STATE OF MONTANA

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Employment, Hours and Earnings, and Labor  
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## ANALYSIS FIRST QUARTER 1976

Many economists agree that increased consumer and corporate spending will be required to provide the primary impetus for a complete economic recovery. Thus far, consumer expenditures have carried the largest share of this recuperative burden. If the forecasts of optimistic economists are correct and if logic prevails, then this current strength of consumer demand will stimulate significant increases in business expansion by the second half of 1976.<sup>1/</sup> In fact, the latest national statistics suggest that capital investment, especially inventory investment, is already turning upward.<sup>2/</sup>

Two factors obviously influence the degree to which consumers spend; consumer sentiment and the availability of capital. Growth rates for both of these factors have been slower in Montana than they have been nationwide. Between first quarter of 1975 and first quarter of 1976, total private gross average weekly earnings for Montanans grew 7.4% while that for the nation increased 7.9%.<sup>3/</sup> Since two-thirds of the latest quarterly increase in final sales nationally "was in consumer and business purchases of motor vehicles",<sup>4/</sup> perhaps such indications could adequately represent comparable measurements of consumer sentiment. If this is true, then sales of new passenger cars increased nationally at 18.4% between first quarter 1975 and first quarter 1976,<sup>5/</sup> while new passenger car registrations in Montana increased 11.7% within this same time interval. In effect, these conclusions suggest that the economic health of Montana is improving, but at a rate slower than the national rate.

1/ Juster, F. Thomas, "The Recovery Gathers Momentum", *ECONOMIC OUTLOOK U.S.A.*, Spring, 1976, pp. 23 - 25.

2/ *BUSINESS CONDITIONS DIGEST*, March, 1976.

3/ *SURVEY OF CURRENT BUSINESS*, April, 1976, page S-16.

4/ *Ibid*, page 1.

5/ *Ibid*, page S-40.

Montana is also beginning to demonstrate some viable employment gains in its primary industries. However, these gains in such industries as mining, lumber and wood products manufacturing, and total manufacturing have not been sufficient in offsetting recessionary losses, nor have they kept pace with comparable national employment gains. These findings also substantiate the argument that Montana's recovery lags behind the nation's.

For the most part, Montana's Leading, Selected, Coinciding, and Composite Indicators have exhibited definite improvements on both a short-term and a long-term basis.

Of the state's Leading Indicators, those providing consistently favorable results include nonagricultural placements, total building permits, residential permits, quit rates, layoff rates, average weekly hours in manufacturing, and new business telephone installations. Average weekly initial claims for March and April were not that encouraging, even though the general direction of this series is economically positive. Despite the latest quarterly decline in the number of new corporations, this volatile indicator has increased in the long run. A similar trend can also be seen in the manufacturing rate of new hires. The accession rate was the only Leading Indicator displaying negative tendencies for both long and short-terms.

All of the Coinciding Indicators have improved since the fourth quarter of 1975, except bank debits and manufacturing power sales. This latter indicator, in addition to the total number of unemployed Montanans and commercial and industrial power sales, reacted negatively in relation to comparable figures for last year.

Latest statistics indicate monthly declines in oil production, real average weekly spendable earnings, and Montana nonagricultural employment. Except for

oil production, these same indicators fared well in the long run, however. Meanwhile, the Farmers Parity Ratio, a soon to be abolished series, improved since last quarter, but declined since last year. On the other hand, performance of the remaining Selected Indicators was generally promising.

Most importantly, both the Montana Composite Index and the Marginal Employment Adjustments Index displayed consistent and significant improvements. In fact, these indices are approaching pre-recession levels.

A fact that bears repeating is that Montana, economically speaking, must stimulate faster growth in the basic industries. If this is not done, then Montana citizens and prospective citizens will have less real money to spend and fewer gainful job opportunities.(in comparison to the number of qualified applicants) than most other states. If proposed industrial expansions in Yellowstone County and north central Montana materialize, then, perhaps, the alleviation of this problem could take giant strides toward a solution.

## MONTANA COPPER MINING: AN HISTORICAL OVERVIEW

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In the late 1870's and early 1880's, many Butte independent miners were panic-stricken by the growing depletion of silver reserves. Marcus Daly, however, visualized even greater wealth in the red metal, which was obviously present within the Butte Hill. After purchasing many mining claims at bargain prices, in 1883, Daly sunk his shaft into the great Anaconda Mine and discovered an abundance of ore containing 30% or possibly even 45% copper.<sup>1</sup>

Subsequently, others jumped on the copper band wagon, including William A. Clark. He, along with Daly, became the wealthiest of the Butte copper and silver barons. This two-tier situation created a power struggle that would last for the next 15 years.

History will show that F. Augustus Heinze was to join this rivalry as a third party, at least to the extent of acquiring additional copper riches. Heinze, after becoming equipped with sufficient capital and engineering knowledge, made his second arrival in Butte in 1892. He then began to produce copper as an independent miner. Heinze became prosperous because of his wise use of the "apex theory", which states that a prospector is allowed to follow and mine a vein downward from its opening near the surface(apex). This young copper king, being convinced by high smelting costs, by abundant copper losses to treatment processes, and by an accidental discovery of the leaching process, raised additional capital for his own smelter.

Having a yard full of tin cans and iron junk on the slope of the Anaconda Mine enabled Jim Ledford to observe the crudest form of the leaching process. Copper sulphate waste, flowing from the Anaconda, passed over the metal debris and left a residue of slush, which was highly composed of copper.

Meanwhile, in the 1890's the power feuds and prosperity continued. Butte's population began to grow at an exorbitant rate. The stage was now set for forming the Anaconda Copper Mining Company.

During a bout with ill health and a simultaneous political bout with Clark, Daly, near the turn of the century, became the first to divest his copper interests to the Amalgamated Copper Company, a subsidiary of the Standard Oil Company. Later W. A. Clark was elected to the United States Senate, which stimulated his lack of active interest in copper holdings and, subsequently, influenced his mining sales to Amalgamated. These transactions left Heinze with very little support in his apex encounter with Amalgamated, soon to be called The Anaconda Copper Mining Company. In 1906, Heinze finally sold out, but not without receiving a favorable price for his claims.<sup>2</sup>

\* The author wishes to express his sincere appreciation to The Anaconda Company and its employees Stephen M. Williams, Counsel, and Robert P. Corbett, Vice President, Administration, for providing information and ideas included in this article.

Economic logic dictates that profits can only be realized when the total monetary amount of sales exceeds operational costs. For this principal to hold true in copper mining, there has always been, since the first copper mines in ancient Spain a requirement for extensive capital or other form of financial support.<sup>3/</sup>, <sup>4/</sup> Huge investments are necessary in this industry, because demand is present but not to the extent of providing profits to small-scale operators. As ores decline in metal content and become geologically more difficult to extract, capital requirements intensify in order to maintain economic viability.

Fortunately, there are two types of technological advances that can be applied to reinforce feasibility within the industry. Demand for copper can be stimulated by the development of new reasons for product usage and by the development of defenses against substitute products. Technology can also be useful in providing better and more efficient methods of extracting copper.

Labor costs and unionization have also had dramatic effects on copper mining in the past fifty years.

Available literature suggests that, at one time or another, all of these mentioned forces have exerted pressure on Montana's copper industry.

From the inception of The Anaconda Copper Mining Company to the Stock Market crash of 1929, evidence implies that mining in Butte provided prosperity to its investors and to its miners.<sup>5/</sup> Increased industrialization played a major role in this growth. Mass production of the automobile made this product a primary user of copper. Growing use of electricity, electrical appliances, and plumbing facilities stimulated additional demand for copper and its alloys. The advent of World War I also favorably affected this prosperous destiny.<sup>6/</sup>

The Great Depression depleted capital reserves of both industrial buyers and ultimate consumers. Thus, demand for copper usage, especially in automobiles and housing, declined tremendously. Lower copper prices followed.<sup>7/</sup> Even though red metal prices began rising again in the mid-1930's,<sup>8/</sup> reasonable figures were not observed until the late 1930's.<sup>9/</sup>

In 1940, prices fell again and the future began to look grim for copper mining in Butte. It appeared as though ore reserves were becoming less plentiful and lower in copper content. Despite the increasing need for copper during the War,<sup>10/</sup> 8,000 residents migrated from Butte in the next eight years (1940 - 1948).<sup>10/</sup>

Fortunately, exploratory efforts turned fruitful in 1947. Two huge deposits of ore were discovered in back of the Butte Hill. Economic stability was restored in this community. In fact, during the last week in November 1950, 1,000 new houses were built or were in the process of being built.<sup>11/</sup>

These newly found ore bodies were large in structure but low in copper content. With these characteristics, some of the ore could be feasibly mined by some form of block caving.<sup>12/</sup> Adhering to simplicity, this underground mining technique can best be described by the following passage:

"Block caving involves undercutting the ore with a series of tunnels, so that, once it is honeycombed with holes, it will crumble, like sawdust in a termite-infested house, and fall by its own weight into cars to be hauled away for smelting."<sup>13</sup>

An additional boost was given to Butte's economy in July 1955. On this date, open-pit copper mining became known to the area.<sup>14</sup> From this time until the early 1970's, The Anaconda Company had employed four methods of producing the red metal in Butte and those were: underground hardrock mining, underground block caving, leach dumping, and open-pit surface mining.<sup>15</sup> As time passed through this time span of nearly twenty years, employment in open-pit operations increased, while inability to produce profits caused a gradual decline in underground operations. Some mines formerly existed in an area now known as the Berkeley Pit.<sup>16</sup> In addition to surface mining, expansion has also taken place in the area of leach dumping.<sup>17</sup>

This time period was not always prosperous for Butte residents. In fact, two devastating labor disputes plagued the industry in the past ten years. The first of these disasters began on July 15, 1967 and lasted a long and bitter eight and one-half months, while the second commenced only four years later (July 1, 1971) and continued for approximately two and one-half months. These labor-management negotiations created many economic hardships for all concerned; remaining strikers lost millions in aggregate personal income,<sup>18</sup> the Company itself lost millions in expected sales not realized,<sup>19</sup> and many local entrepreneurs lost thousands in overdue and unpaid accounts.<sup>20</sup>

In addition to this, Butte's largest employer received another blow to its economic stability from the Chilean government. This South American country decided to buy out Anaconda's interest (at prices far below their estimated worth) and nationalize its copper industry.<sup>21</sup> The company is still receiving income tax write-offs because of this loss.

This Chilean incident and the two major labor disputes has led to management reorganizations,<sup>22</sup> and attempts by other firms to gain future tax advantages by acquiring control of Anaconda.<sup>23</sup> The Company has also had to adhere to stronger environmental legislation.<sup>24</sup> In addition, diminishing copper prices hurt the industry in 1974 and 1975.

Despite these discouraging facts, The Anaconda Company and Butte must strive toward stability. Presently, the Company cannot continue with unfeasible operations and remain as a future viable employer for the community. Layoffs have occurred through a realization of this economic fact.<sup>25</sup> Butte, on the other hand, cannot maintain viability as a single-industry town. A warehouse and transportation center (Port of Butte)<sup>26</sup> and a multi-million dollar engineering research project (MHD)<sup>27</sup> provide concrete evidence that Butte is beginning to diversify.

The long-run future for copper mining is expected to be one without growth, unless technological advances justify the feasibility of mining ores beneath the Berkeley Pit or unless Butte's central business district relocates sufficiently to resume underground activity.<sup>28</sup> Meanwhile, Berkeley Pit operations should remain stable for the next 18 to 20 years and should produce at its present rate, since concentrator capacity prohibits profitable production at a slower and at a faster pace.<sup>29</sup>

From as far back as 1935, at least one source predicted that Butte and its copper mining industry would only flourish another twenty years.<sup>30/</sup> Butte and its primary economic base has survived twenty years in excess of this prediction, and they are expected to survive an additional twenty years. Finally, this expected life is quite capable of being extended by new engineering technology, which, incidentally, has rescued this community several times in the past.

FOOTNOTES:

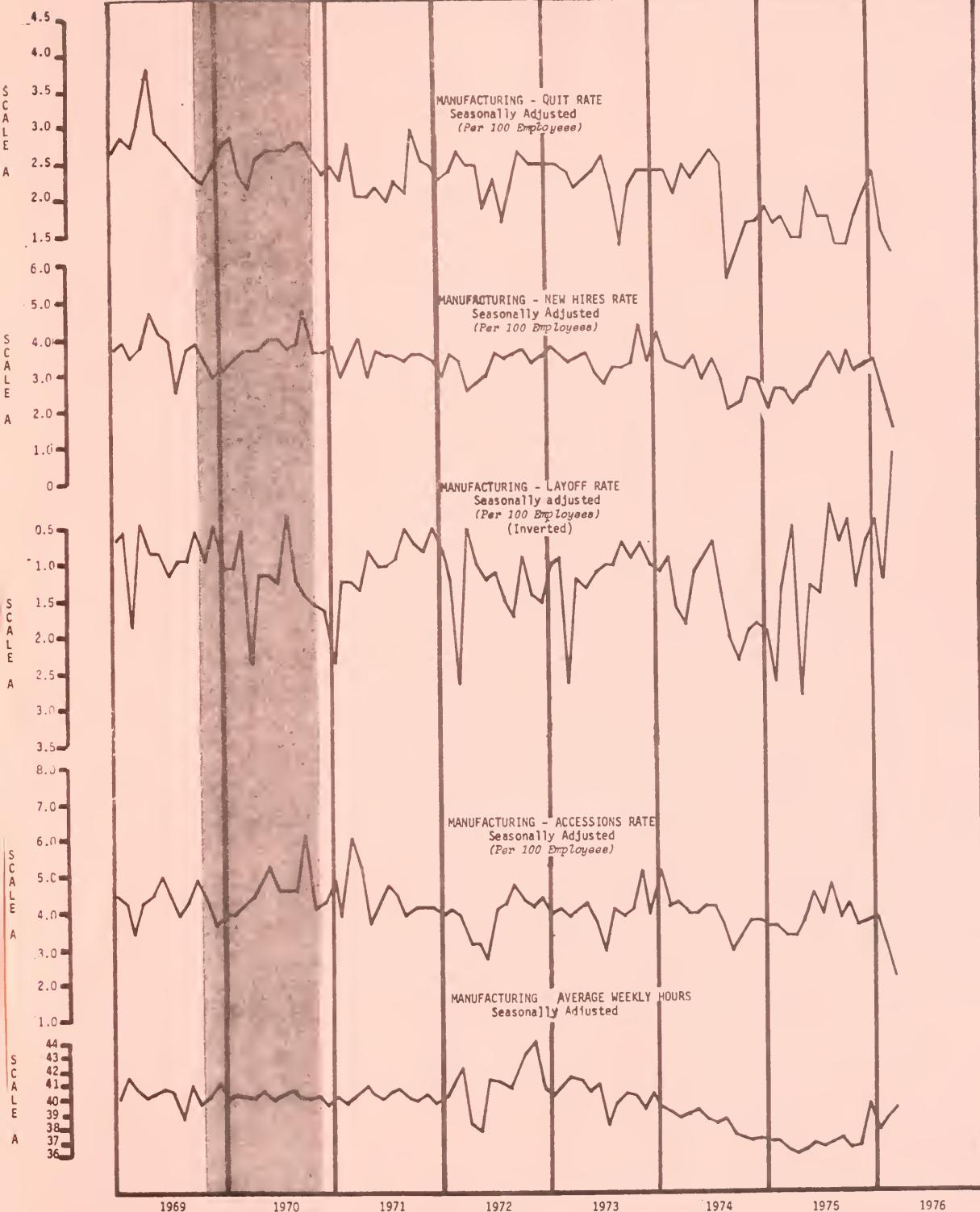
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2. Much of the historical discussion to this point has been taken from facts provided in the novel, WAR OF THE COPPER KINGS, by C. B. Glasscock, published in New York by Grosset and Dunlap, 1971.
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6. Glasscock, pp. 309 - 310.
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8. "Copper Comeback", BUSINESS WEEK, October 6, 1934, p. 14.
9. "Copper Prices Firmer", BUSINESS WEEK, March 4, 1939, p. 44.
10. "Richest Hill on Earth", LIFE MAGAZINE, December 4, 1950, p. 84.
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12. Lewis, Robert S. and Clark, George B., ELEMENTS OF MINING, Third Edition, (New York: John Wiley and Sons, 1967), pp. 513 - 521.
13. "Richest Hill on Earth", p. 87.
14. "The Undermining of Butte", NEWSWEEK, November 6, 1972, p. 93.
15. Conversation with Robert P. Corbett, Vice President, Administration, The Anaconda Company.
16. MONTANA STANDARD - BUTTE DAILY POST, March 12, 1972.
17. MONTANA STANDARD - BUTTE DAILY POST, November 21, 1971.
18. "A Bitter Aftermath", NEWSWEEK, April 15, 1968, p. 80.
19. "The Great Copper Strike", FORTUNE, June 15, 1968, p. 310.
20. "A Bitter Aftermath", p. 80
21. "Copper Giant Learns the Hard Way", BUSINESS WEEK, July 5, 1969, p. 17.
22. "An Ex-Banker Treats Copper's Sickest Giant", BUSINESS WEEK, February 19, 1972, pp 52 - 55.

FOOTNOTES (Cont.):

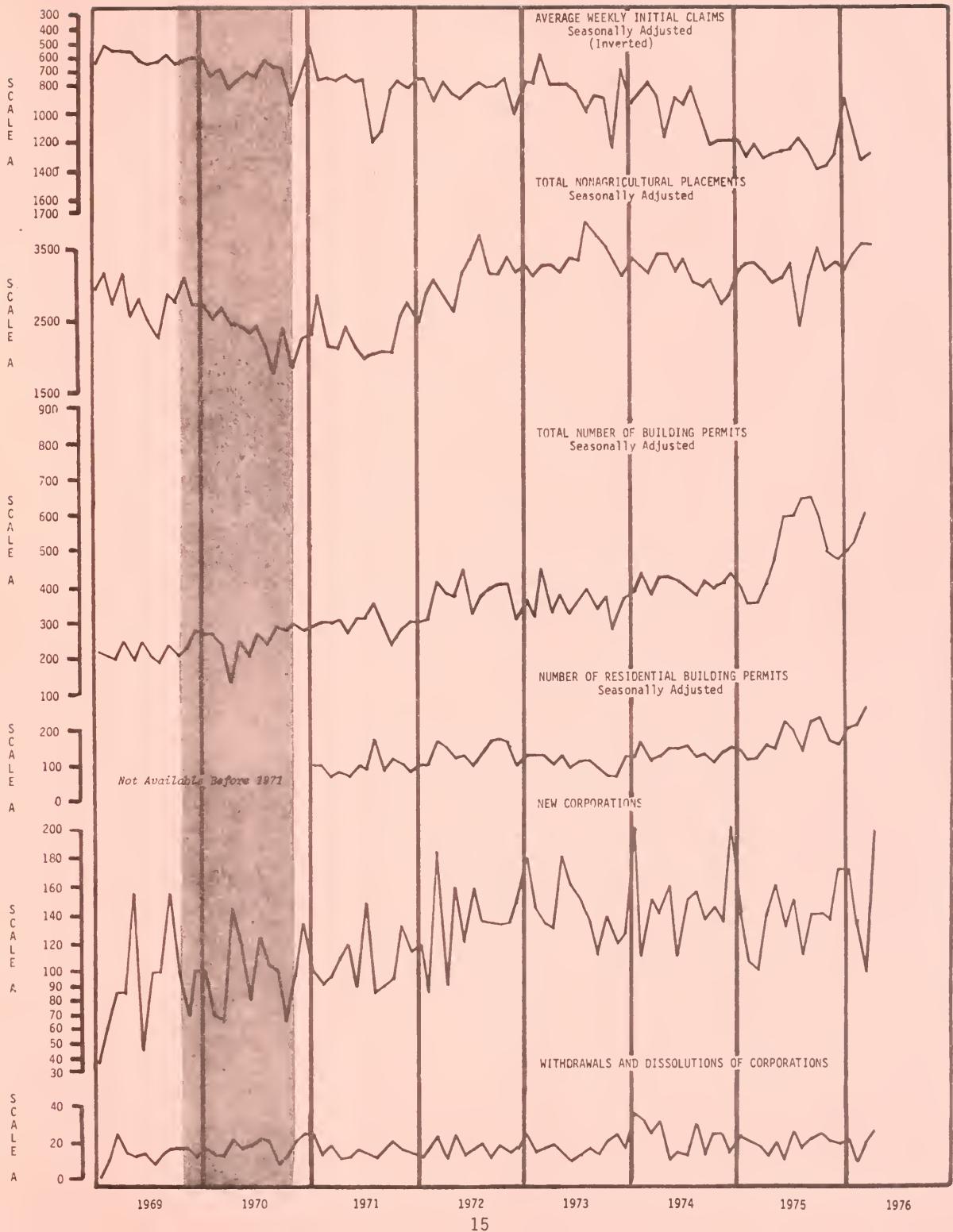
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24. "An Ex-Banker Treats Copper's Sickest Giant", p. 55.
25. MONTANA STANDARD - BUTTE DAILY POST, April 4, 1975.
26. MONTANA STANDARD - BUTTE DAILY POST, March 14, 1975.
27. MONTANA STANDARD - BUTTE DAILY POST, June 29, 1975.
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29. Conversation with Robert P. Corbett.
30. *Joralemon*, pp. 112 - 113.

MANUFACTURING

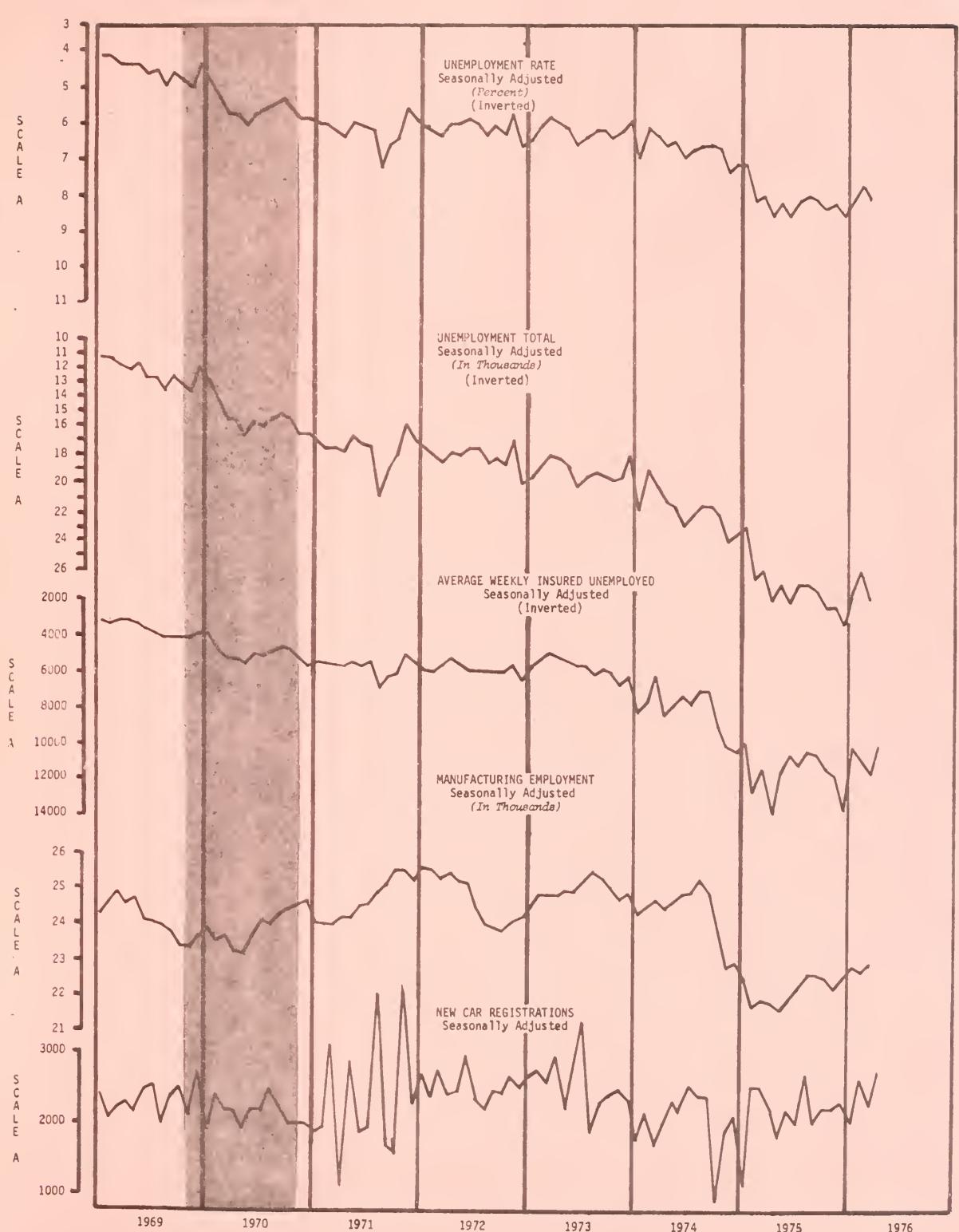
	New Hires Rate (Per 100 Employees)		Quit Rate (Per 100 Employees)		Accessions Rate (Per 100 Employees)		Layoff Rate (Per 100 Employees)		Average Weekly Hours		
	<u>UNADJ</u>		<u>ADJ</u>		<u>UNADJ</u>		<u>ADJ</u>		<u>UNADJ</u>		
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.
1974	1.5	2.3	3.1	4.1	1.1	1.2	3.9	5.1	39.5	39.1	
	1.3	2.3	1.7	3.3	0.7	1.0	2.4	4.0	38.5	38.8	
	1.4	2.0	2.5	3.2	2.1	1.7	3.6	4.1	38.0	38.4	
	2.2	2.4	2.9	3.1	1.7	1.9	3.8	3.9	37.8	38.5	
	2.4	2.2	4.4	3.4	0.5	1.2	5.2	3.9	38.6	38.9	
	2.4	2.4	5.2	2.8	0.3	1.0	6.7	4.0	38.1	38.3	
	2.5	2.6	4.4	3.3	0.4	0.8	5.4	4.0	37.5	38.0	
	3.4	2.4	3.4	2.8	1.9	1.5	3.8	3.5	38.8	38.3	
	3.2	0.8	2.8	1.9	2.6	2.1	3.4	2.8	38.1	37.4	
	1.5	0.9	2.6	2.1	2.9	2.4	3.5	3.1	38.1	37.1	
	0.9	1.6	1.3	2.8	2.2	2.0	1.9	3.6	36.6	36.8	
	0.8	1.6	1.2	2.7	2.2	1.9	2.0	3.6	37.0	36.9	
1975	1.1	1.8	0.8	1.9	1.9	2.0	2.6	3.5	37.2	36.7	
	0.7	1.6	0.9	2.4	2.3	2.7	2.0	3.5	36.3	36.7	
	1.1	1.7	1.7	2.4	1.8	1.4	2.6	3.2	35.8	36.3	
	1.2	1.4	1.7	2.0	0.6	0.6	3.0	3.2	35.1	36.0	
	1.6	1.4	3.4	2.3	2.2	2.9	4.9	3.6	35.9	36.3	
	2.3	2.1	4.8	2.5	0.5	1.4	7.4	4.4	36.7	36.7	
	1.7	1.7	4.2	3.0	1.1	1.5	4.9	3.8	36.0	36.5	
	2.9	1.7	4.2	3.4	0.7	0.3	5.1	4.6	37.2	36.8	
	3.1	1.3	3.3	2.8	1.2	0.8	4.0	3.7	38.1	37.1	
	1.6	1.3	4.0	3.4	1.0	0.5	4.5	4.1	37.3	36.4	
	1.0	1.7	1.5	2.9	1.7	1.4	1.7	3.5	36.1	36.6	
	1.3	2.0	1.6	3.1	1.2	0.8	2.0	3.6	39.8	39.4	
1976	1.6	2.3	2.1	3.2	0.4	0.5	2.8	3.7	38.1	37.6	
	0.6	1.5	1.1	2.5	0.9	1.3	1.5	3.0	37.9	38.3	
	0.6	1.2	0.9	1.5	0.1	0.1	-0.4	2.1	38.7	39.2	



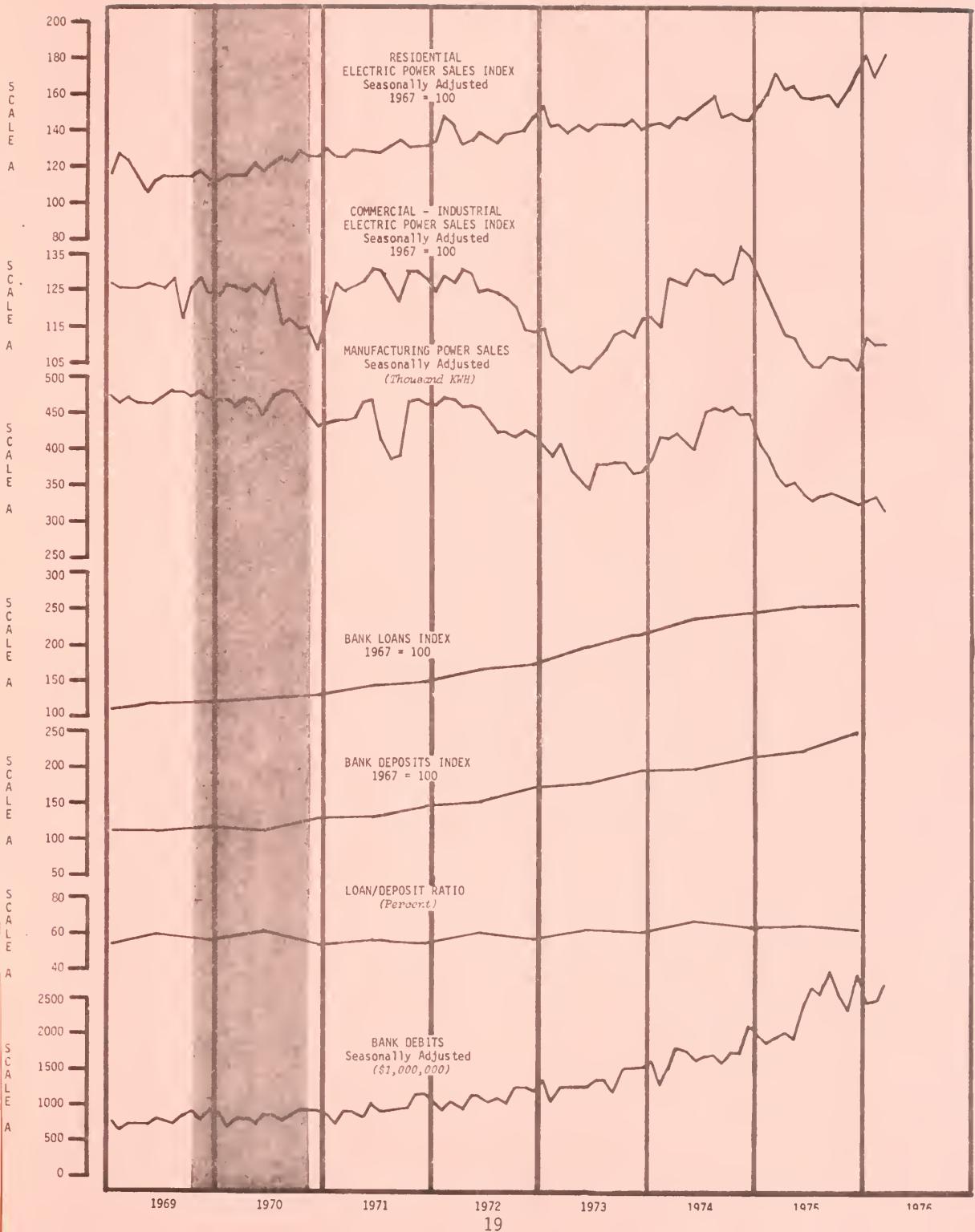
	Average Weekly Initial Claims	Total Nonagricultural Placements	Number of Building Permits		Number of Residential Building Permits		New Corporations		Withdrawals and Dissolutions of Corporations	
			Adj.	Unadj.	Adj.	Unadj.	Adj.	Unadj.	Adj.	Unadj.
1974	1,595	937	2,336	3,335	165	377	51	120	200	36
	948	863	2,041	3,210	262	427	101	165	110	31
	865	794	2,281	3,129	357	366	128	111	152	25
	788	885	3,074	3,410	565	419	181	124	140	33
	898	1,184	3,991	3,397	542	423	178	140	160	10
	677	909	3,713	3,167	508	410	153	139	108	14
	737	962	3,979	3,312	467	392	165	151	148	11
	628	834	4,954	3,014	447	373	121	119	153	30
	743	1,025	3,744	2,942	465	408	140	128	134	12
	1,150	1,242	3,264	3,037	441	391	113	100	145	23
	1,372	1,218	2,401	2,715	341	396	125	132	136	25
1975	1,676	1,220	1,809	2,925	253	432	112	139	199	18
	1,891	1,215	2,169	3,146	176	386	67	134	138	25
	1,449	1,330	2,088	3,237	148	339	59	113	104	20
	1,221	1,249	2,476	3,253	302	343	123	116	102	18
	1,295	1,357	2,839	3,100	523	395	203	146	138	11
	1,057	1,315	3,428	2,871	582	458	176	137	161	19
	1,059	1,296	3,476	2,921	699	579	230	214	132	10
	1,065	1,285	3,954	3,224	668	585	210	191	148	26
	891	1,209	4,236	2,385	730	633	135	133	109	15
	989	1,295	3,893	3,049	720	637	228	210	139	22
	1,412	1,418	3,735	3,464	644	576	236	222	142	23
	1,615	1,401	2,689	3,128	404	485	138	159	137	20
1976	1,744	1,316	2,044	3,270	283	464	127	155	171	18
	1,501	824	2,154	3,132	276	487	129	136	170	21
	1,240	1,122	2,209	3,364	319	512	146	200	132	8
	1,326	1,362	2,744	3,518	553	595	265	258	101	20
	1,249	1,310	3,247	3,499					198	23



Unemployment Rate (Percent)	Unemployment Total (in thousands)			Average Weekly Insured Unemployed			Manufacturing Employment (in thousands)			New Car Registrations		
	UNADJ		ADJ	UNADJ		ADJ	UNADJ		ADJ	UNADJ		ADJ
	UNADJ	ADJ	ADJ	UNADJ	ADJ	ADJ	UNADJ	ADJ	ADJ	UNADJ	ADJ	ADJ
1974	9.2	6.9	27.5	21.7	12,056	8,212	23.5	24.3	1,294	1,215	1,215	1,215
	8.1	6.1	24.2	19.1	11,576	7,699	23.7	24.5	1,144	1,144	1,144	1,144
	7.6	6.3	23.5	20.2	3,067	6,207	23.4	24.1	1,759	1,713	1,713	1,713
	6.8	6.6	21.6	21.2	2,112	3,336	23.4	24.1	1,910	1,727	1,727	1,727
	5.6	6.5	18.5	21.6	6,545	7,787	24.1	24.6	2,551	2,324	2,324	2,324
	6.9	6.9	24.2	22.8	5,342	7,410	25.6	24.9	2,158	2,244	2,244	2,244
	6.0	6.7	21.2	22.2	6,031	7,376	26.0	24.9	2,690	2,543	2,543	2,543
	5.2	6.6	18.2	21.5	4,817	6,984	26.1	25.2	2,529	2,422	2,422	2,422
	5.2	6.6	17.4	21.6	4,587	6,950	25.5	24.8	2,666	2,389	2,389	2,389
	5.6	6.7	18.3	22.2	6,893	9,040	24.5	23.8	1,523	940	940	940
	7.1	7.3	22.6	24.0	9,584	10,473	23.2	22.8	2,060	1,916	1,916	1,916
	7.6	7.1	24.3	23.5	12,084	10,664	22.7	22.9	1,517	2,070	2,070	2,070
1975	9.4	7.1	28.9	23.0	14,013	9,943	21.6	22.5	485	1,175	1,175	1,175
	10.2	8.1	31.4	26.4	16,960	12,649	20.8	21.5	2,145	2,524	2,524	2,524
	9.2	8.0	29.3	26.1	14,015	11,443	20.5	21.9	2,620	2,531	2,531	2,531
	8.7	8.5	28.0	27.6	15,065	13,767	20.4	21.8	2,340	2,173	2,173	2,173
	7.2	8.2	23.6	26.6	10,669	11,634	21.0	21.6	1,000	1,845	1,845	1,845
	8.4	8.5	29.4	27.7	8,430	10,640	22.7	21.9	2,080	2,190	2,190	2,190
	7.4	8.1	25.6	26.5	9,290	11,133	23.5	22.2	2,197	2,028	2,028	2,028
	6.6	8.0	23.0	26.4	7,530	10,384	23.9	22.6	2,913	2,691	2,691	2,691
	6.6	8.1	22.5	26.9	7,526	10,625	23.6	22.6	2,263	2,030	2,030	2,030
	7.3	8.3	24.2	28.1	9,202	11,473	23.3	22.5	2,809	2,229	2,229	2,229
	8.0	8.2	26.6	28.0	11,430	11,822	22.4	22.2	2,334	2,220	2,220	2,220
	9.1	8.5	30.1	29.2	15,027	13,628	22.2	22.5	1,773	2,303	2,303	2,303
1976	10.3	8.1	33.6	27.7	14,264	10,173	21.9	22.8	1,339	2,038	2,038	2,038
	9.7	7.7	31.8	26.3	15,281	10,938	21.8	22.7	2,273	2,534	2,534	2,534
	9.4	8.2	31.3	28.2	14,187	11,642	21.5	22.9	2,364	2,286	2,286	2,286
	10.5	9.3	31.3	28.2	11,593	10,283	21.5	22.9	3,080	2,919	2,919	2,919
	Jun.											
	Jul.											
	Aug.											
	Sep.											
	Oct.											
	Nov.											
	Dec.											







Employment-  
Lumber and  
Wood Products  
(in Thousands)

Natural Gas  
Withdrawals  
(Million Cu.Ft.)

Oil Refined  
(Thousands Barrels.)

Nonagricultural  
Employment Index\*\*

Oil and  
Gas Wells  
Completed

UNADJ ADJ UNADJ ADJ

	Farmers Parity Ratio*	MONTANA	U. S.
1974	9.1	114.0	116.3
	9.2	115.2	116.3
Jan.	9.4	114.9	116.4
Feb.	9.5	116.1	116.6
Mar.	9.1	118.1	117.1
Apr.	8.7	117.1	117.3
May	9.2	117.1	117.3
June	10.2	117.3	117.6
July	10.5	117.4	117.4
Aug.	10.6	118.8	117.6
Sep.	10.1	117.6	117.5
Oct.	9.7	117.6	117.5
Nov.	8.7	117.4	116.7
Dec.	8.2	118.7	116.1
	8.0	65	6,190
	7.8	7.7	117.1
	7.1	7.5	116.1
Jan.	7.3	55	114.7
Feb.	7.1	7.6	117.1
Mar.	7.1	116.5	114.6
Apr.	6.8	117.3	114.9
May	7.5	118.3	114.8
June	8.5	115.1	115.1
July	9.2	118.5	115.6
Aug.	9.9	119.2	116.0
Sep.	9.8	120.3	115.8
Oct.	9.0	120.6	115.9
Nov.	8.6	122.2	116.1
Dec.	8.4	52	121.1
	8.7	52	116.5
	8.2	8.6	121.2
Jan.	8.3	8.7	121.5
Feb.	8.2	8.7	120.9
Mar.			120.9
Apr.			
May			
June			
July			
Aug.			
Sep.			
Oct.			
Nov.			
Dec.			

Oil Refined  
(Thousands Barrels.)

Nonagricultural  
Employment Index\*\*

Oil and  
Gas Wells  
Completed

UNADJ ADJ UNADJ ADJ

	Farmers Parity Ratio*	MONTANA	U. S.
1975	7.3	117.1	115.3
	7.1	116.1	114.7
Jan.	7.1	55	114.7
Feb.	7.6	117.1	114.6
Mar.	7.1	116.5	114.9
Apr.	6.8	117.3	114.8
May	7.5	118.3	115.1
June	8.5	115.1	115.1
July	9.2	118.5	115.6
Aug.	9.9	119.2	116.0
Sep.	9.8	120.3	115.8
Oct.	9.0	120.6	115.9
Nov.	8.6	122.2	116.1
Dec.	8.4	52	121.1
	8.7	52	116.5
	8.2	8.6	121.2
Jan.	8.3	8.7	121.5
Feb.	8.2	8.7	120.9
Mar.			120.9
Apr.			
May			
June			
July			
Aug.			
Sep.			
Oct.			
Nov.			
Dec.			

Nonagricultural  
Employment Index\*\*

Oil and  
Gas Wells  
Completed

UNADJ ADJ UNADJ ADJ

\* 1947 - 1949 = 100      \*\* MONTANA: 1970 = 100      U.S.: 1967 = 100

\* 1947 - 1949 = 100

SCALE A  
SCALE A

EMPLOYMENT  
LUMBER AND WOOD PRODUCTS  
Seasonally Adjusted  
(In Thousands)

FARMERS PARITY RATIO  
 $1947 - 1949 = 100$

MONTANA NONAGRICULTURAL  
EMPLOYMENT INDEX  
 $1970 = 100$

U. S. NONAGRICULTURAL  
EMPLOYMENT INDEX  
 $1967 = 100$

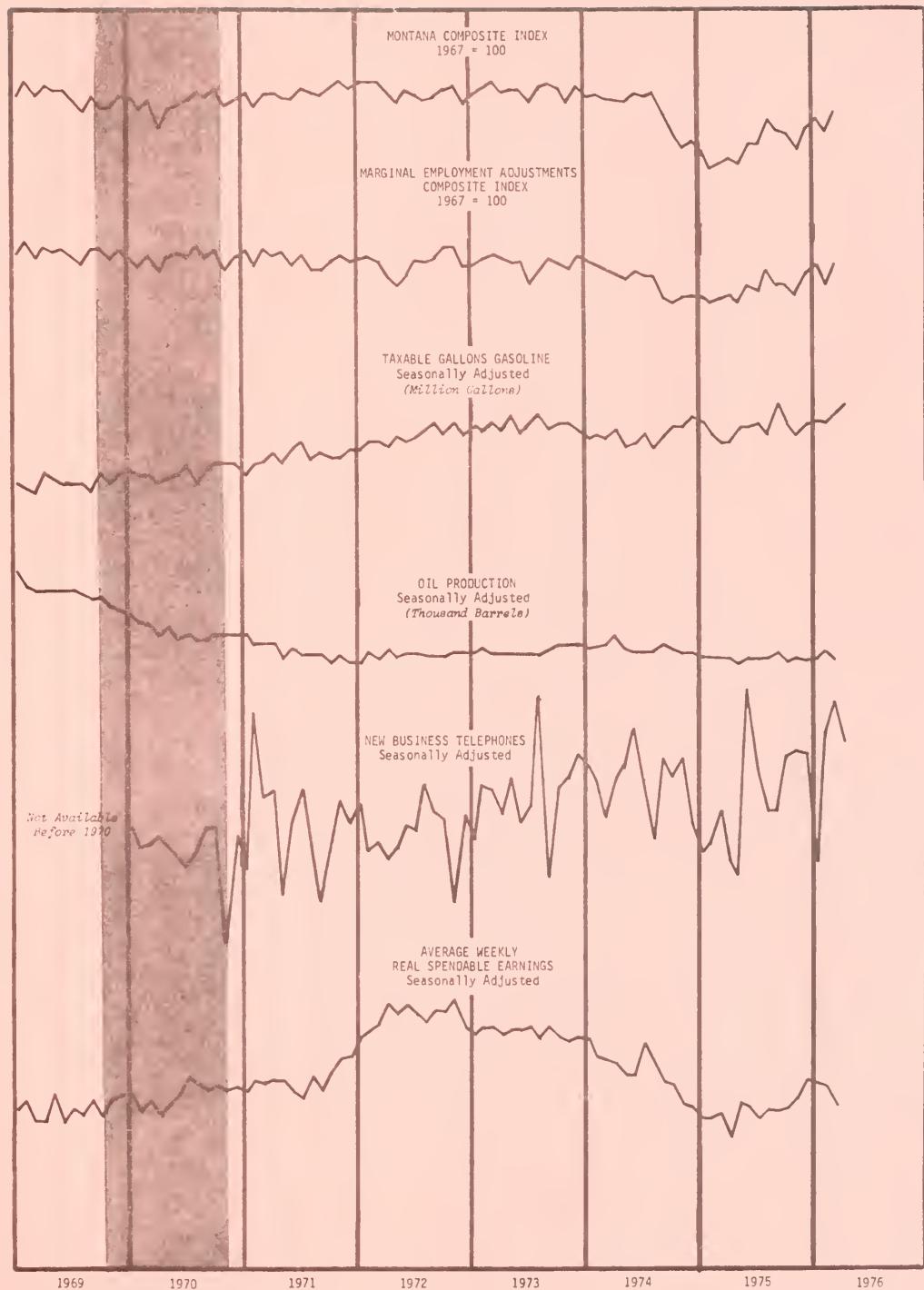
NATURAL GAS WITHDRAWALS  
Seasonally Adjusted  
(Million Cubic Feet)

OIL AND GAS WELLS COMPLETED

OIL REFINED  
Seasonally Adjusted  
(Thousands Barrels)

MONTANA Composite Index 1967=100	Marginal Employment Adjustments Index	Taxable Gasoline (Thousands Gallons)		Oil Production (Thousands Barrels)		New Business Telephones UNADJ		Gross Average Weekly Spendable Earnings UNADJ		Average Weekly Spendable Earnings ADJ	
		UNADJ	ADJ	UNADJ	ADJ	UNADJ	ADJ	UNADJ	ADJ	UNADJ	ADJ
1974	Jan.	100.0	97.9	29,558	36,918	2,907	2,920	221	180	143.47	146.37
	Feb.	100.2	97.4	28,329	37,496	2,667	2,903	154	156	144.08	147.56
	Mar.	99.7	97.0	31,589	36,989	3,028	2,932	122	111	145.20	147.81
	Apr.	99.4	96.3	34,118	38,082	2,990	3,046	224	162	147.29	148.78
	May.	99.3	96.0	36,058	35,799	3,009	2,900	344	180	148.47	149.55
	Jun.	100.3	96.9	41,047	36,511	2,839	2,852	342	224	152.21	150.92
	Jul.	100.2	96.8	49,953	37,607	2,855	2,831	204	158	159.90	156.75
	Aug.	100.2	96.3	49,938	35,847	2,882	2,852	41	82	159.84	156.16
	Sep.	97.8	93.6	38,482	37,367	2,850	2,880	95	195	157.38	154.25
	Oct.	94.7	92.9	39,202	38,627	2,911	2,838	83	160	157.75	155.47
	Nov.	93.4	93.6	35,052	38,379	2,738	2,782	62	194	154.94	155.17
	Dec.	94.0	93.8	35,294	39,898	2,844	2,785	10	101	154.28	155.78
1975	Jan.	92.7	93.5	32,027	39,260	2,768	2,777	89	63	152.28	155.26
	Feb.	90.3	92.7	28,261	37,428	2,548	2,763	64	73	152.80	156.46
	Mar.	91.0	93.1	30,835	36,309	2,854	2,752	136	116	155.09	157.68
	Apr.	91.6	93.6	32,217	36,313	2,701	2,753	82	49	154.22	155.79
	May	91.0	92.8	38,603	38,300	2,767	2,673	188	32	157.24	158.46
	Jun.	93.7	94.8	42,723	38,364	2,683	2,712	398	273	160.81	159.55
	Jul.	93.7	94.0	51,173	38,851	2,707	2,707	229	170	163.52	160.25
	Aug.	96.7	96.8	51,450	37,404	2,793	2,760	38	116	165.07	161.34
	Sep.	95.2	94.9	43,364	41,241	2,777	2,798	1	116	165.53	162.27
	Oct.	94.8	94.9	39,571	38,829	2,778	2,702	131	184	168.98	163.63
	Nov.	92.7	93.4	33,913	37,199	2,694	2,734	106	193	165.34	165.57
	Dec.	95.3	96.3	34,242	38,750	2,775	2,713	112	190	167.81	169.34
1976	Jan.	96.8	97.6	31,913	39,082	2,732	2,742	77	51	165.89	168.92
	Feb.	95.0	95.1	29,664	38,831	2,611	2,824	207	215	164.98	168.74
	Mar.	97.4	97.4	34,652	40,163	2,805	2,702	276	257	163.70	166.27
	Apr.							236	206		
	May										
	Jun.										
	Jul.										
	Aug.										
	Sep.										
	Oct.										
	Nov.										
	Dec.										

SCALE A  
SCALE A



Indicator	Unit	Monthly Data			Percent Change	
		Latest Month 1976	Last Month	Last Year	Last Month	Last Year
<u>LEADING INDICATORS</u>						
Initial Claims						
Seasonally Adjusted	Avg. No./Wk.	Apr:	1,310	1,362	1,357	-3.8
Unadjusted	Avg. No./Wk.	Apr:	1,249	1,326	1,295	-5.8
Nonagricultural Placements						
Seasonally Adjusted	Number	Apr:	3,499	3,518	3,100	-0.5
Unadjusted	Number	Apr:	3,247	2,744	2,839	18.3
Total Building Permits						
Seasonally Adjusted	Number	Mar:	595	512	343	16.2
Unadjusted	Number	Mar:	553	319	302	73.4
Residential Building Permits						
Seasonally Adjusted	Number	Mar:	258	200	116	29.0
Unadjusted	Number	Mar:	265	146	123	81.5
Quit Rate						
Seasonally Adjusted	Rate/100	Mar:	1.2	1.5	1.7	-20.0
Unadjusted	Rate/100	Mar:	0.6	0.6	1.1	0
New Hires Rate						
Seasonally Adjusted	Rate/100	Mar:	1.5	2.5	2.4	-40.0
Unadjusted	Rate/100	Mar:	0.9	1.1	1.7	-18.2
Layoff Rate						
Seasonally Adjusted	Rate/100	Mar:	-0.4	1.3	1.4	-121.4
Unadjusted	Rate/100	Mar:	0.1	0.9	1.8	-88.9
Accession Rate						
Seasonally Adjusted	Rate/100	Mar:	2.1	3.0	3.2	-30.0
Unadjusted	Rate/100	Mar:	1.5	1.5	2.6	0
Average Weekly Hours-Mfg.						
Seasonally Adjusted	Hours	Mar:	39.2	38.3	36.3	2.3
Unadjusted	Hours	Mar:	38.7	37.9	35.8	2.1
New Business Telephones						
Seasonally Adjusted	Number	Apr:	206	257	49	-19.8
Unadjusted	Number	Apr:	236	276	82	-14.5
New Corporations	Number	Apr:	198	101	138	96.0
Withdrawals & Dissolutions of Corporations	Number	Apr:	23	20	11	15.0
						109.1

<u>INDICATOR</u>	<u>UNIT</u>	MONTHLY DATA			PERCENT CHANGE	
		Latest Month 1976	Last Month	Last Year	Last Month	Last Year
<u>COINCIDING INDICATORS</u>						
Unemployment Rate						
Seasonally Adjusted	Percent	Mar: 8.2	7.7	8.0	.5	2.5
Unadjusted	Percent	Mar: 9.4	9.7	9.2	-3.1	2.2
Unemployment Rate						
Seasonally Adjusted	Thousands	Mar: 28.2	26.3	26.1	2.2	8.9
Unadjusted	Thousands	Mar: 31.3	31.8	29.3	-1.6	2.8
Insured Unemployed						
Seasonally Adjusted	Avg.Wkly.No.	Apr: 10,282	11,642	13,767	-11.7	-25.3
Unadjusted	Avg.Wkly.No.	Apr: 11,593	14,187	15,065	-18.3	-23.0
Manufacturing Employment						
Seasonally Adjusted	Thousands	Mar: 22.9	22.7	21.9	0.9	4.6
Unadjusted	Thousands	Mar: 21.5	21.8	20.5	-1.4	4.5
New Car Registrations						
Seasonally Adjusted	Number	Apr: 2,919	2,286	2,173	27.7	34.3
Unadjusted	Number	Apr: 3,080	2,364	2,340	30.3	31.6
Residential Power Sales						
Seasonally Adjusted	Index	Mar: 180.5	168.3	170.4	7.2	5.9
Unadjusted	Index	Mar: 191.7	201.1	181.7	-4.7	5.5
Manufacturing Power Sales						
Seasonally Adjusted	Thousand KWH	Mar: 311.5	330.1	360.3	-5.6	-13.5
Unadjusted	Thousand KWH	Mar: 324.8	331.7	373.9	-2.1	-13.1
Commercial - Industrial						
Power Sales						
Seasonally Adjusted	Index	Mar: 109.2	109.1	117.0	0.1	6.7
Unadjusted	Index	Mar: 109.1	106.0	117.0	2.9	6.0
Bank Loans	Index	1975 Dec: 252.0	-----	240.8	-----	4.7
Bank Debits						
Seasonally Adjusted	\$1,000,000	Mar: 2675.0	2458.9	1924.6	8.8	39.0
Unadjusted	\$1,000,000	Mar: 2611.8	2252.2	1863.7	16.0	40.1
Bank Deposits	Index	1975 Dec: 244.1	-----	214.3	-----	12.3

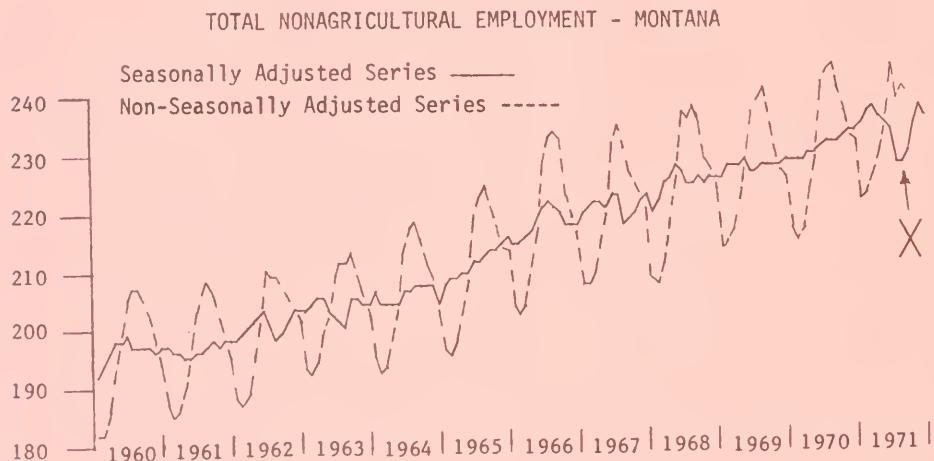
<u>INDICATOR</u>	<u>UNIT</u>	MONTHLY DATA			PERCENT CHANGE		
		Latest Month 1976	Last Month	Last Year	Last Month	Last Year	
<u>SELECTED INDICATORS</u>							
Employment - Lumber and Wood Products							
Seasonally Adjusted	Thousands	Mar:	8.7	8.7	7.6	0	14.5
Unadjusted	Thousands	Mar:	8.2	8.3	7.1	- 1.2	15.3
Farmers Parity Ratio	Ratio	Mar:	54	-	55	-	- 1.9
Montana Nonag. Employment	Index	Mar:	120.9	121.5	117.1	- 0.5	3.2
U. S. Nonag. Employment	Index	Feb:	117.9	117.5	114.7	0.3	2.8
Natural Gas Withdrawals							
Seasonally Adjusted	Mil.Cu.Ft.	Mar:	3,593	3,086	3,250	16.4	10.6
Unadjusted	Mil.Cu.Ft.	Mar:	4,262	3,996	3,914	6.7	8.9
Oil & Gas Wells Completed	Number	Mar:	75	40	61	87.5	23.0
Oil Refined							
Seasonally Adjusted	Thous.Bbls	Mar:	4,156	4,134	4,003	0.5	3.8
Unadjusted	Thous.Bbls	Mar:	4,117	3,809	3,969	8.1	3.7
Oil Production							
Seasonally Adjusted	Thous.Bbls	Mar:	2,702	2,824	2,752	- 4.3	- 1.8
Unadjusted	Thous.Bbls	Mar:	2,805	2,611	2,854	- 7.4	- 1.7
Taxable Gallons Gasoline							
Seasonally Adjusted	Thous.Gals	Mar:	40,163	38,831	36,309	3.4	10.6
Unadjusted	Thous.Gals	Mar:	34,652	29,664	30,835	16.8	12.4
Average Weekly Spendable Earnings							
Seasonally Adjusted	Dollars	Mar:	85.52	86.75	85.06	- 1.4	0.5
Unadjusted	Dollars	Mar:	84.02	84.77	83.58	- 0.9	0.6
Loan/Deposit Ratio	Percent	1975	60.3	-	64.1	-	- 5.9
<u>COMPOSITE INDICATORS</u>							
Montana Composite Index	Index	Mar:	97.4	95.0	91.0	2.5	7.0
Marginal Employment Index	Index	Mar:	97.4	95.1	93.1	2.4	4.6

## APPENDIX I

### GLOSSARY

Seasonal Adjustment - A mathematical procedure in which certain monthly or yearly variations such as climate, holidays, vacation practices, etc., are removed from the statistics. The purpose of this is to simplify analysis over a long period of time and to highlight such non-seasonal occurrences as strikes, natural disasters, floods, earthquakes, etc.

Non-Seasonally Adjusted - or "raw" data will not always reflect such occurrences precisely because of seasonal influences. For example, the following chart is a graph of total nonagricultural employment for the State of Montana for the years 1960 to 1971.



Note the erratic nature of the non-adjusted data, and that a non-seasonal phenomena occurred in 1971 directly above the "X" mark. During this period a labor-management dispute occurred and the seasonally adjusted figures emphasize this point whereas the dispute is not readily apparent in the non-adjusted data. A word of caution is due at this point about non-adjusted and adjusted data. Adjusted data is not a "substitute" for actual data, and should in no way be used as such.

Economic Indicators - Statistical time series whose cyclical characteristics are known and fairly stable, particularly in the timing of their cyclical peaks and troughs relative to business cycle turns. Economic Indicators are used for the interpretation of current, and the anticipation of prospective, business conditions.

Leading Indicators - An economic series that tends to reverse direction sufficiently in advance of changes in total business activity. The peaks and troughs of this type of indicator generally occur from three to several months previous to the peak or trough in total business activity.

Coincidental Indicators - An economic series that tends to parallel the same general pattern of total business activity.

Selected Indicators - A cyclical time series whose true value as an economic indicator is not yet known.

Lagging Indicators - An economic series that tends to reverse direction (reach its peaks or troughs) some time after the total business pattern has changed.

Other Indicators - A statistical series that combines the cyclical changes of the other types of economic indicators. For example, personal income generally lags at the peaks, and leads at the troughs of total business activity.

Montana Composite Index - A composite of six leading indicators of employment and economic activity: Building Permits, Manufacturing Employment, Average Weekly Hours, Average Weekly Initial Claims, Accession Rate and Layoff Rate. A reverse trend has been used for Layoff Rate and Average Weekly Initial Claims. The components are converted to series of standardized changes and weighted according to their significance and reliability as economic indicators in making the composite. This composite index is not comparable to the U. S. composite index as published in "Business Conditions Digest", U. S. Department of Commerce.

Marginal Employment Adjustments Index - A composite of four leading indicators of employment changes or adjustments: Average Weekly Hours, Average Weekly Initial Claims, Layoff Rate, and Accession Rate. In producing the composite these components are seasonally adjusted, converted to series of standardized changes, and weighted according to their significance and reliability as economic indicators. This composite indicator tends to lead changes in the unemployment rate by approximately five months.

Labor Turnover - The movement of wage and salary workers in and out of employment status.

Accessions - All permanent or temporary additions to the employment rolls, which include new hires and other accessions.

New Hires - Permanent and temporary additions to employment rolls of persons who have never been employed by a specific reporting establishment. This includes former employees who have been rehired although not specifically recalled by the reporting employer.

Other Accessions - Additions to the employment rolls of transfers from other establishments of the same company; employees returning from military service or unpaid leaves of absence; employees specifically recalled by an employer.

Separations - The termination of employment of persons who quit, are laid off, discharged, retire, die, are inducted into the military for service exceeding 30 consecutive days, suffer physical disabilities, or are transferred to other divisions of the same company.

Quits - The termination of employment initiated by an employee for any reason other than retirement, transfer, or service in the Armed Forces.

Layoffs - Suspension from pay status of an employee, expected to last seven consecutive days. This action must be initiated by the employer without prejudice to the worker, for reasons such as lack of orders, model changeover, termination of seasonal employment, inventory-taking, plant breakdown, shortage of materials.

SERIES BREAK - Pages 13 and 17

Beginning with January 1970, the following series, Montana Unemployment Rate, Montana Unemployment Total, and Montana Nonagricultural Employment Index, were changed to reflect a change in the concept of measuring employment requested by the U. S. Department of Labor of all State Employment Security Agencies. The change was made to ensure comparability between states, and to make employment data published by this agency for Montana comparable to national labor force concepts. Civilian Labor Force series now reflect a count of employed and unemployed persons by place of residence (known as residence data) rather than by place of work (known as establishment data). The years 1970, 1971, 1972, and 1973 were revised to the residence concept and as a result data after January 1970 are not strictly comparable to data published earlier.

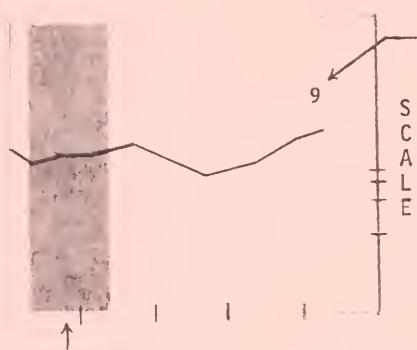
Conceptually, the difference between the old "Work Force" and the new "Labor Force" series is that the new series eliminates duplicate counting of multiple job holders, and persons who work in Montana but reside in another state. However, people who live in Montana but work elsewhere are included in the new "Labor Force" estimates.

Residence and establishment data supplement one another and the Montana Employment Security Division will continue to publish establishment data for nonagricultural industries on employment, hours and earnings, and labor turnover for those users who need this type of information.



## APPENDIX II

KEY



Arabic numbers above graph lines indicate the last month of the year for which data have been plotted.

"A" indicates that scale is arithmetic.

"L1", "L2", or "L3" indicate a ratio (semilogarithmic) scale of 1, 2, or 3 decks respectively.

Shaded areas on the graph indicate recession periods in the United States as designated by the National Bureau of Economic Research.

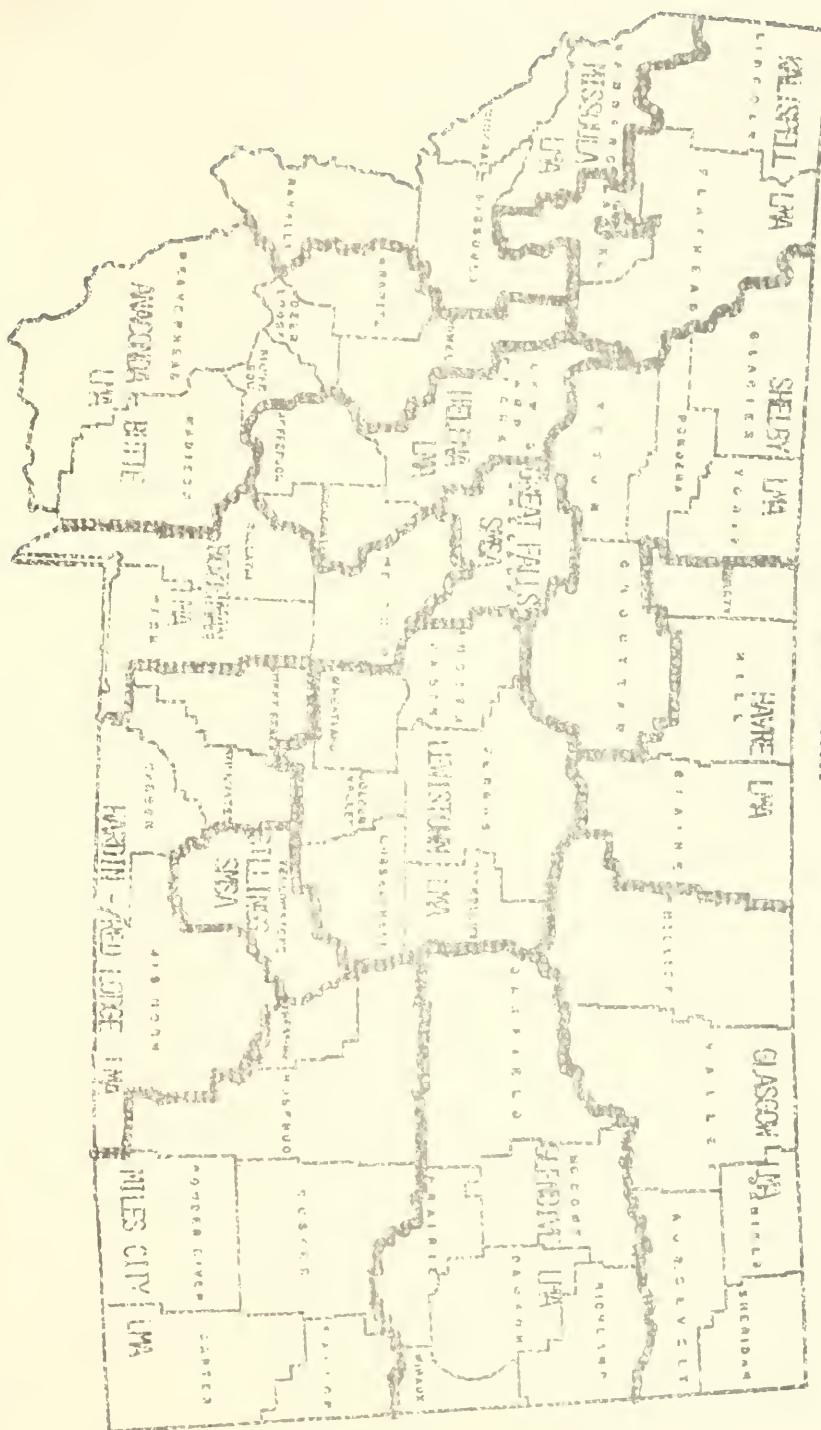
Broken lines on graphs indicate that data is not available for that time period.

Montana's indicators have been classified into three types; Leading, Coinciding, and Selected. The classification of Montana's Leading and Coinciding Indicators parallels the Department of Commerce, Bureau of Economic Analysis classification. This has been done to facilitate an easier and more accurate comparison of individual indicators with those of the nation. (This classification, however, does not mean that the Montana Employment Service has endorsed any particular economic theory.)

Historical data available upon request.

LABOR MARKET AREAS

MONTANA



EMPLOYMENT SECURITY DIVISION  
DEPARTMENT OF LABOR AND INDUSTRY  
P. O. Box 1728  
Helena, Montana 59601

POSTAGE AND FEES PAID  
EMPLOYMENT SECURITY MAIL  
LAB 449

OFFICIAL BUSINESS

The Montana State Employment Service maintains 23 local employment offices in the principal cities of Montana. You are invited to call on any of these offices for assistance in filling positions in your organization, additional labor market information, and for other services in connection with your employment problems.